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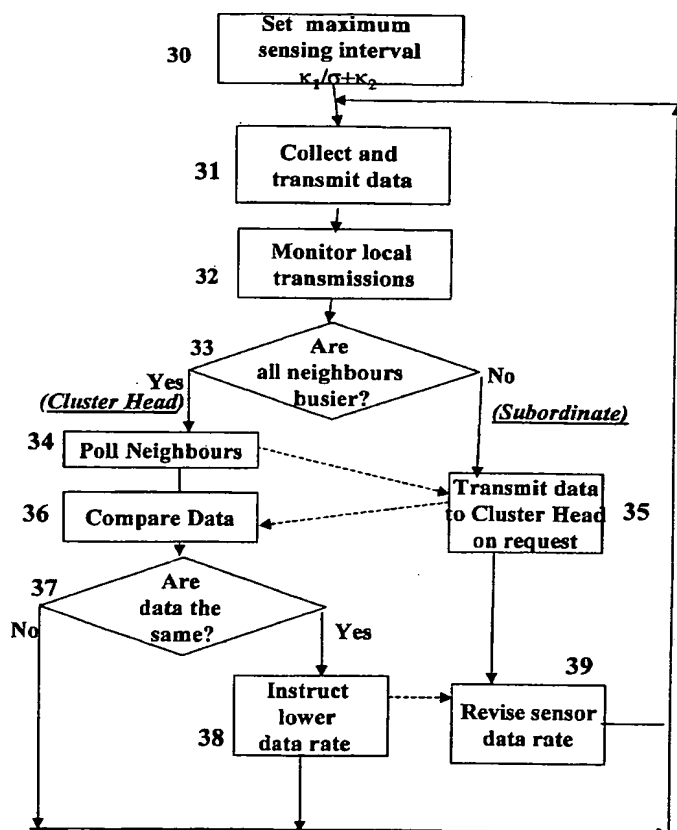
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(54) Title: **AD HOC SENSOR NETWORKS**



(57) Abstract: A plurality of mobile sensor devices each periodically measure a property of their environment, and determine the rate of change in that property. Neighbouring devices also co-operate to determine the values of the property being measured by each other. If the property is invariant both over time and over a number of neighbouring devices, their periodicity of measurement-taking is reduced to conserve power for more significant measurement events. The devices may co-operate to relay their measurements to a data collection point. Each device determines the level of data traffic being carried by one or more neighbouring devices, identifies the device that is carrying the least traffic, and puts itself under the control of that device. Any device that determines that it is carrying less such traffic than any of its neighbours assumes control of the data sensing rate for itself and those neighbours, and transmits control data to the said other devices to co-ordinate their data collection rates and stagger their data collection times.

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